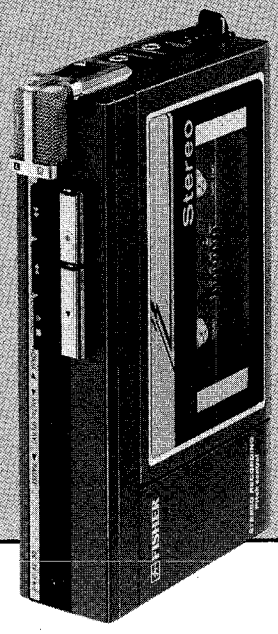
SERVICE MANUAL

FISHER

PH 55

Stereo Mini Cassette Recorder

(EUROPE)



SPECIFICATIONS

Power Source	
DC	3V (AA Cell x 2)
Power Consumption	400mW x 2 (max.)
Current Consumption (at Vol. min.)	
Record mode	160mA
Playback mode	170mA
Fast Forward	260mA
Rewind mode	260mA
Recording System	AC Bias
Erasing System	Magnet Erasing
Tape Speed	1-7/8ips. ± 3%
Pitch Control:	+20～ -10%
Wow & Flutter	0.4% (WRMS)
Fast Forward Time	220sec. (with C-60)
Rewind Time	220sec. (with C-60)
Frequency Response (Overall)	125Hz～ 8,000Hz
Erase Ratio (Overall)	50dB
Signal to Noise Ratio	37dB
Crosstalk	
Track to Track	55dB
Channel Separation	30dB
Harmonic Distortion (K3)	10%
Hum & Noise (at Vol. min.)	-60dBs
Terminal Impedance	
MIC.	2.2kΩ
Headphone	32Ω
Oscillation Frequency	40kHz

–Specifications subject to change without notice.–

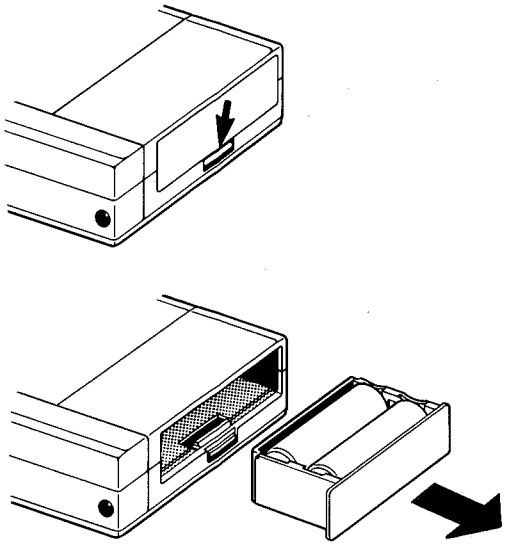
DISASSEMBLY INSTRUCTIONS

GENERAL REMARKS

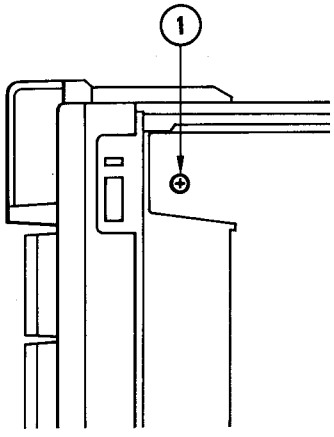
Before disassembling the unit, spread a soft cloth or a rubber mat on the workbench to avoid scratches and grease spots.
As static electricity is likely to damage transistors and ICs, spread a cloth or the like which does not cause static electricity.
Reassemble the unit correctly noting the kinds of fastening screws and leads. Please refer to the circuit diagrams and exploded views.

CABINET BOTTOM REMOVAL

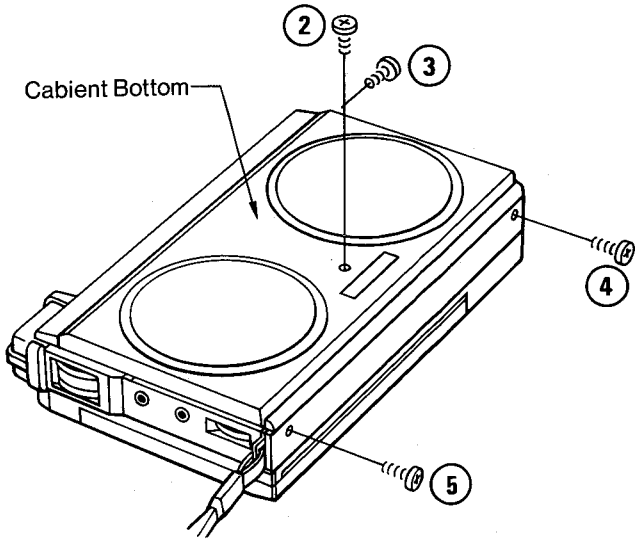
1. Push the battery case button, located on the bottom of the unit, in the direction of the arrow and slide the Battery Case out as illustrated.



2. Open the Cassette Compartment Lid by pressing the Stop/Eject Button. Then, remove the screw (1) fastening the Cabinet Bottom.



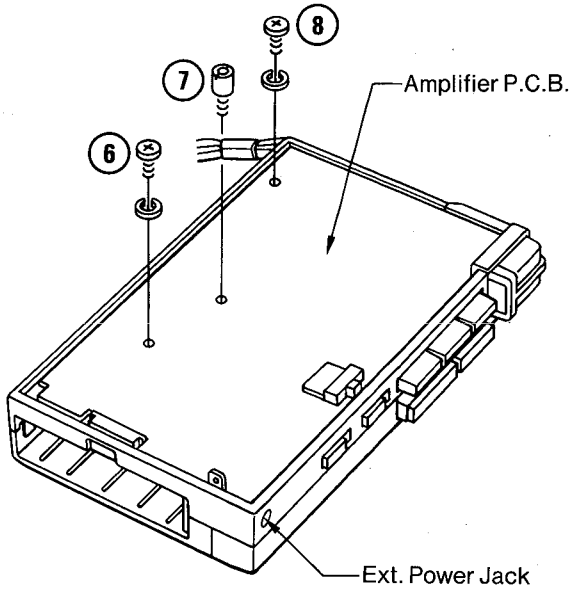
3. Remove the four screws (2 ~ 5) fastening the Cabinet Bottom. Then, detach the Cabinet Bottom by lifting it off.



4. Reassemble in reverse order.

AMPLIFIER P.C.BOARD REMOVAL

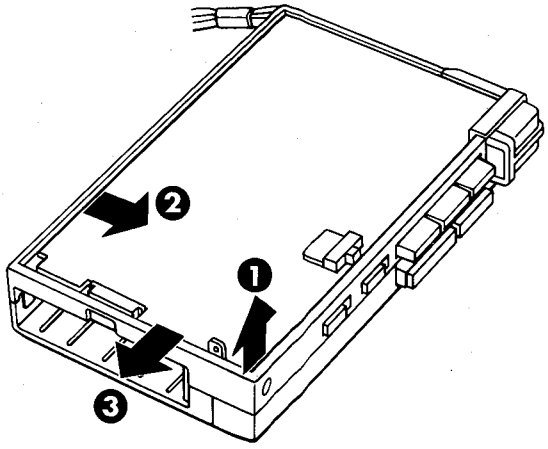
1. Remove the Cabinet Bottom by following its removal instruction. Then, disconnect the two leads (black and white) of the Motor, the two leads (black and red) of the LED Indicator and the capacitor (C403) of the Headphone Jack from the Amplifier P.C.Board.

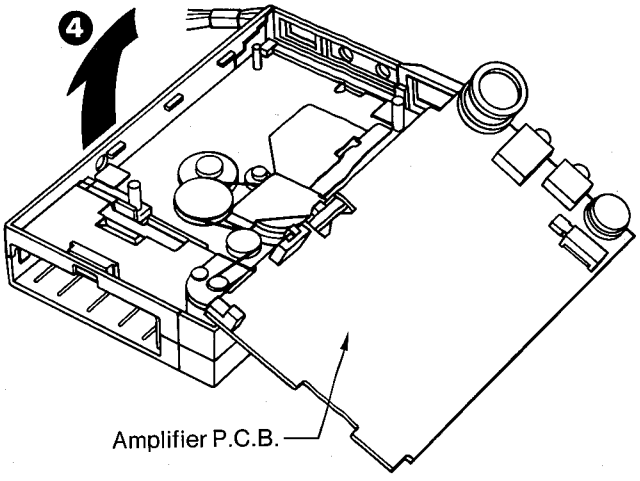


2. Remove the two screws (6 and 8) and the post (7) from the Amplifier P.C.Board. Then, lift the external power jack side on the P.C.Board in the direction of the arrow (1), and move the P.C.Board in the direction of the arrow (2).

3. Remove the P.C.Board from the Cabinet by pulling it in the direction of the arrow (3) and detach the P.C.Board from the unit by lifting it in the direction of the arrow (4) as illustrated, noting the lead wires.

DISASSEMBLY INSTRUCTIONS (Continued)



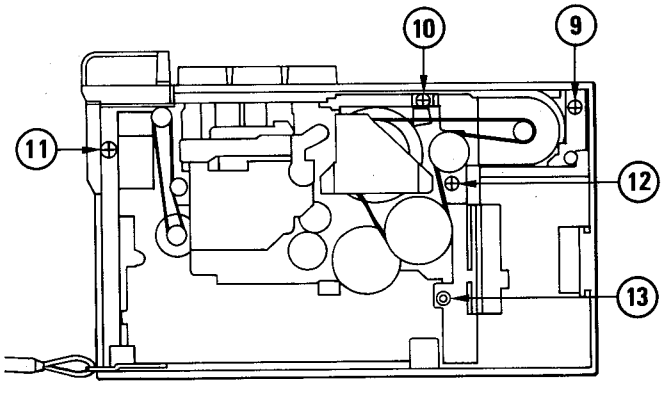


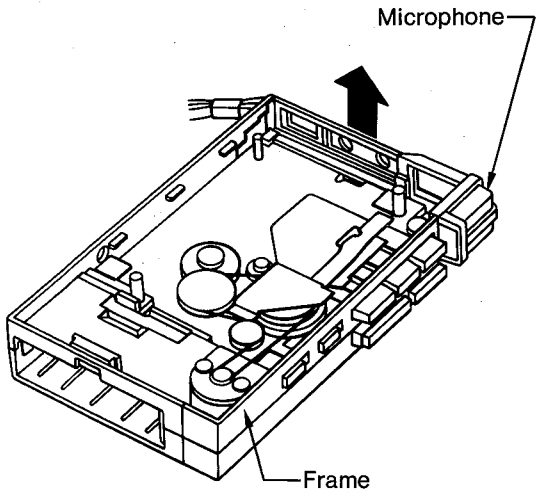
4. Reassemble in reverse order.

MECHANISM CHASSIS REMOVAL

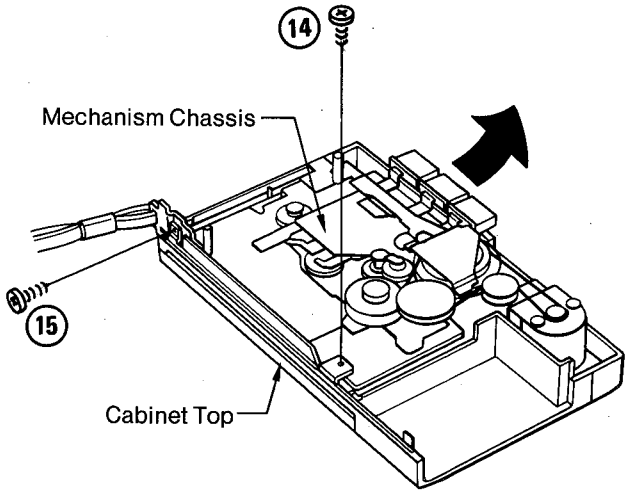
1. Remove the Cabinet Bottom and the Amplifier P.C.Board by following their removal instructions.

2. Detach the Frame Bracket by removing the screw (9). Then, remove the three screws (10 ~ 12) and the post (13) fastening the Frame.
   Detach the Frame by lifting it in the direction of the arrow.





3. Remove the two screws (15 and 16) fastening the Mechanism Chassis and detach the Chassis from the Cabinet Top by lifting it in the direction of the arrow.



4. Reassemble in reverse order.

NOTES ON REASSEMBLY

1. Before the Amplifier P.C.Board is mounted on the Mechanism Chassis, confirm that any resistors and capacitors are not in contact with the functioning parts of the mechanism.

2. After the Amplifier P.C.Board has been mounted on the Mechanism Chassis, confirm that the Record/Play and Power Switches function correctly. After that, tighten the screws fastening the Amplifier P.C.Board.

ADJUSTMENTS

GENERAL REMARKS

1. Before adjusting the mechanism of the unit, wipe the tape contacting surfaces clean as well as the rubber surfaces of the driving parts with a soft cloth soaked in alcohol. Trouble may occur because of oil and grease stains.

2. Keep the belts clean while the adjustments are performed.

3. Note that the unit is released from electrical motion when the unit in motion, whose cabinet has been removed, is illuminated by strong light because the photo-coupler reacts to the light and the rotation detection circuit works.

EQUIPMENT REQUIRED

- VTVM (2 sets)
- Frequency Counter
- Dualtrace Synchroscope
- DC Constant-voltage Regulator
- Dummy Load (33Ω)
- Test Tape
  - * 3kHz Test Tape (Example: TEAC MTT-111) for Tape Speed Adjustment
  - * 10kHz Test Tape (Example: TEAC MTT-114) for Head Azimuth Adjustment
- Alignment Tool

NOTE:

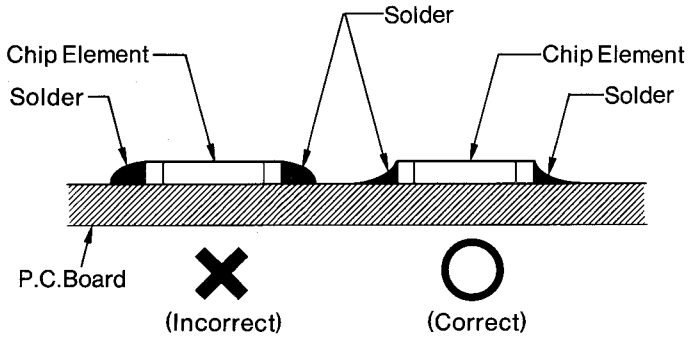
- * Supply 6.0V DC from the constant-voltage regulator to the External Power Jack at the adjustments.
- * Turn the Speed Control Knob to "click position".
- * Set the Tape Select Switch to Normal position.

NOTES ON HANDLING THE CHIP ELEMENT

Pay due caution to the following items:

1. Do not use the removed chip element again.

2. Use a soldering iron of less than 30W.
   - * The soldering iron should not touch the body of the chip element.
   - * Complete soldering in a short time.
   - * Apply solder to the chip element as illustrated below.



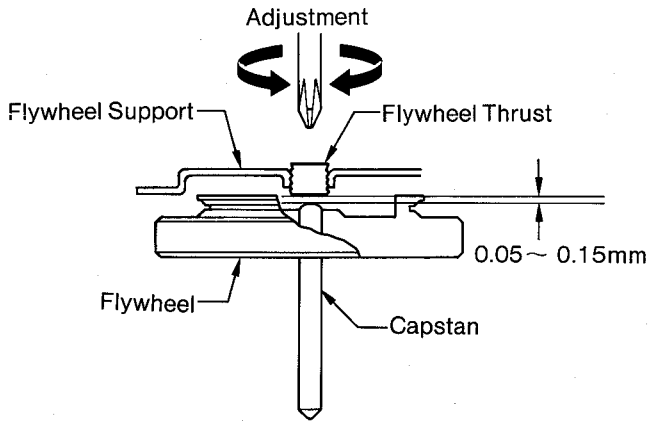
FLYWHEEL THRUST ADJUSTMENT

The clearance between the Flywheel Thrust and the Flywheel should be 0.05 ~ 0.15mm with the Chassis turned over.
If necessary, adjust the clearance by the following procedures.

1. While moving the Capstan up and down, slowly turn the Flywheel Thrust clockwise to obtain the clearance of "0" (zero) between the Thrust and the Flywheel.

   NOTE:
   Do not turn the Flywheel Thrust forcibly.

2. Turn the Thrust counter-clockwise by 45° ~ 90°.

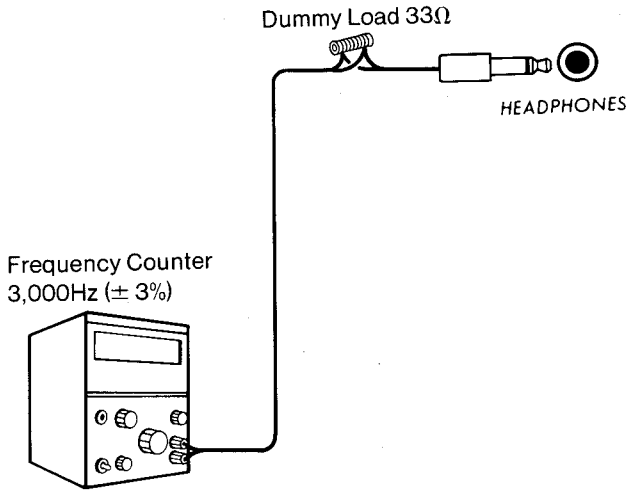


3. After the adjustment, secure the Thrust with paint or glue.

TAPE SPEED ADJUSTMENT

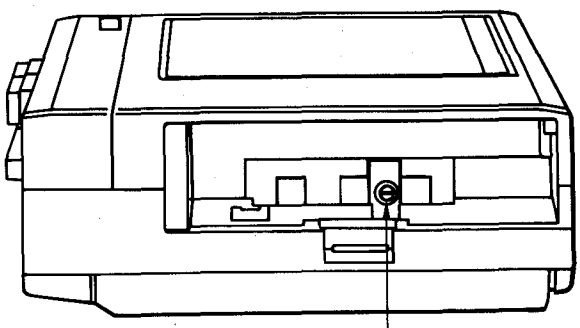
1. Insert a 3kHz test tape (Example: TEAC MTT-111) into the cassette compartment and open the battery compartment lid.

2. Connect the frequency counter to the headphone jack as illustrated and play back the test tape.



ADJUSTMENTS (Continued)

3. While playing back the test tape, adjust the tape speed by turning the potentiometer (P1) on the Amplifier P.C.Board until the frequency counter reads 3,000Hz (±3%).

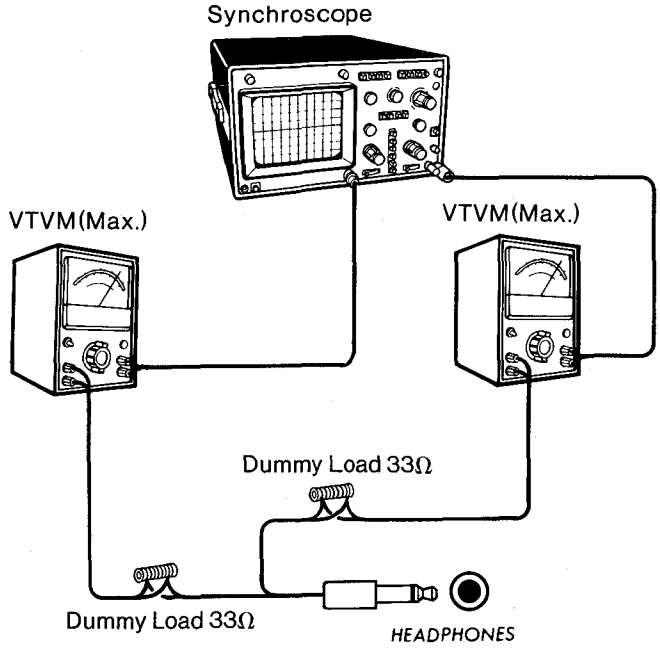


Potentiometer for Tape Speed Adjustmemt

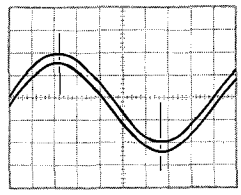
HEAD AZIMUTH ADJUSTMENT

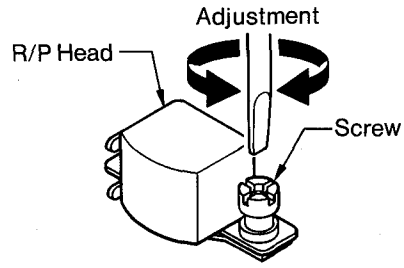
1. Connect the two VTVM and the dualtrace synchroscope to the headphone jack as illustrated. Then, set the dualtrace synchroscope as follows:
   * MODE ..... CHOP (chopped)
   * SOURCE ..... INT (internal), CH1 or CH2
   * SWEEP MODE ..... AUTO (automatic)

   NOTE:
   Adjust the field on the synchroscope with the VOLT. ADJ. and TIME ADJ.



2. Insert a 10kHz test tape (Example: TEAC MTT-114) into the cassette compartment. While playing back the test tape, turn the azimuth adjusting screw until the wave forms of the right and left channels are superimposed and set to optimum at the maximum reading on the VTVM.





3. After the adjustment, secure the adjusting screw with paint or glue.

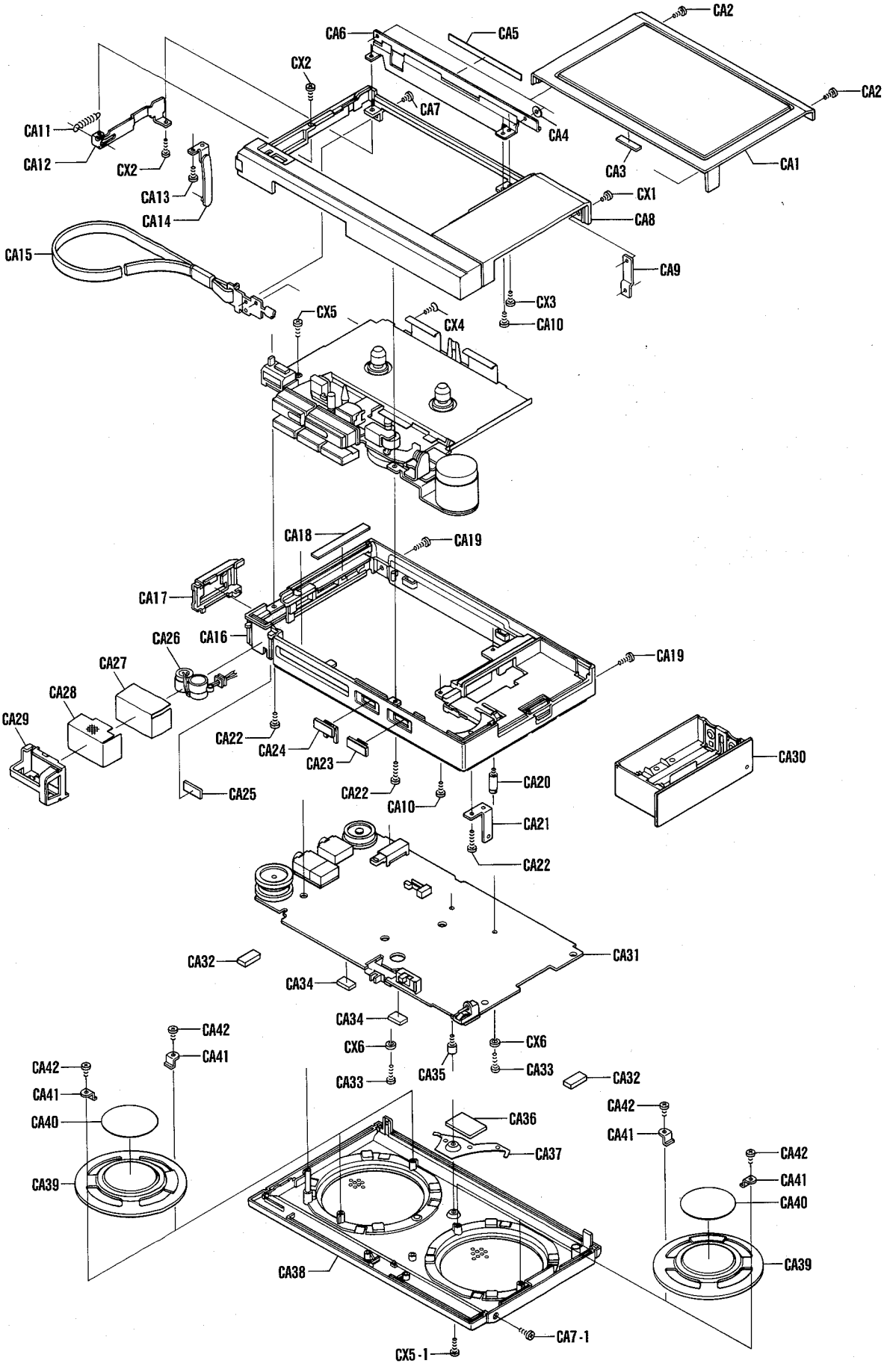
PARTS LIST

Ref. No.	Part No.	Description		Q'ty
	PACKAGE			
	141 6 1419 61901	Individual Carton		1
	141 6 1449 79600	Styrofoam Case		1
	141 6 2519 12090	Poly Cover		2
	141 6 2519 12090	Poly Cover		1
	141 6 4559 03300	Serial No. Sheet		3
	ACCESSORIES			
	4 1529 70262	Headphone		1
	4 2419 74052	Cassette		1
	141 2 1769 06200	Shoulder Strap		1
	141 2 1819 13501	Carrying Case		1
	142 6 4119 31542	Instruction Manual		1
	HEADPHONES			
1	4 2369 73560	Plug Cord		1
2	141 2 3529 36700	Tube		2
3	141 2 4469 41100	Ear Pad		2
4	4 1519 71230	Ear Speaker		2
5	141 2 1259 04500	Housing		2
6	141 2 1769 06304	Hanger, Left		1
7	141 2 1769 06305	Hanger, Right		1
8	141 2 8219 32400	Stopper		2
9	141 2 3529 36800	Slider Adjustor		2
10	141 2 1769 06400	Slider		1
	CABINET			
CA1	141 0 1249 22500	Cassette Lid Assy		1
CA2	141 2 4219 28401	Screw, Pan Hd.	+M1.4x2.5	2
CA3	141 2 4419 07200	Cushion, Cassette Lid		1
CA4	141 2 4539 19300	Washer		1
CA5	141 2 2899 23800	Adhesive Sheet		1
CA6	141 2 2519 02700	Hinge		1
CA7	141 2 4219 10502	Screw, Pan Hd.	+M1.7x3.0	1
CA7-1	141 2 4219 10501	Screw, Pan Hd.	+M1.7x3.0	1
CA8	141 0 1119 83200	Completed Cabinet Top		1
CA9	141 2 2149 16700	Cabinet Bracket		1
CA10	141 2 4219 18601	Screw, Pan Hd.	+M1.7x2.5	2
CA11	141 2 8549 04700	Spring, Cassette Lid		1
CA12	141 2 2529 03500	Link Bracket		1
CA13	141 2 4219 18602	Screw, Pan Hd.	+M1.7x2.5	1
CA14	141 0 2529 00100	Link Assy		1
CA15	141 0 1789 00300	Hand Strap Assy		1
CA16	141 0 1149 09301	Frame Assy		1
CA17	141 2 1519 35100	Cap, Volume		1
CA18	141 2 4419 15600	Sheet		1
CA19	141 2 4219 10601	Screw, Pan Hd.	+M1.7x4.0	2
CA20	141 2 7539 03000	Post, Cabinet		1
CA21	141 2 2149 16800	Frame Bracket		1
CA22	141 2 4219 27300	Screw, Pan Hd.	+M1.7x6.0	3
CA23	141 2 1649 17200	Knob, Pause		1
CA24	141 2 1649 17300	Knob, Wide		1
CA25	141 2 4419 16800	Sheet		1
CA26	141 0 3899 00100	Holder Mike Assy ([BM1/Left] & [BM2/Right] are included.)		1
CA27	141 2 2449 41600	Sheet		1
CA28	141 2 1519 34400	Grille, Mike		1
CA29	141 2 1519 32100	Cap, Mike		1
CA30	141 0 1819 00500	Completed Battery Case		1
CA31	4 1329 77620	Amplifier P.C.B. Assy [**See PCB1**]		1
CA32	141 2 4459 10000	Damper, Cassette Lid		2
CA33	141 2 4219 10602	Screw		2
CA34	141 2 4469 18200	Cushion		2
CA35	141 2 7539 20800	Post, Bottom Center		1
CA36	141 2 4469 17200	Cushion		1
CA37	141 2 3229 36300	Shield Plate		1
CA38	141 0 1119 83101	Cabinet Bottom Assy		1
CA39	4 1519 71071	Speaker (8Ω) [SP1]		1
CA39	4 1519 71071	Speaker (8Ω) [SP2]		1
CA40	141 2 2449 42100	Sheet		2
CA41	141 2 3729 03300	Speaker Bracket		4
CA42	141 2 4219 18500	Micro Cassette Screw		4
CX1	128 3 1317 01618	PI Screw-3, Pan Hd.	+M1.7x1.6	1
CX2	127 3 1314 02514	PI Screw-1, Pan Hd.	+M1.4x2.5	2
CX3	127 3 1314 01614	PI Screw-1, Pan Hd.	+M1.4x1.6	1
CX4	127 3 1217 02518	PI Screw-1, Flat Hd.	+M1.7x2.5	1
CX5	128 3 1317 05014	PI Screw-3, Pan Hd.	+M1.7x5.0	1
CX5-1	128 3 1317 05018	PI Screw-3, Pan Hd.	+M1.7x5.0	1
CX6	110 3 2101 70013	Spring Washer-2	M1.7	2

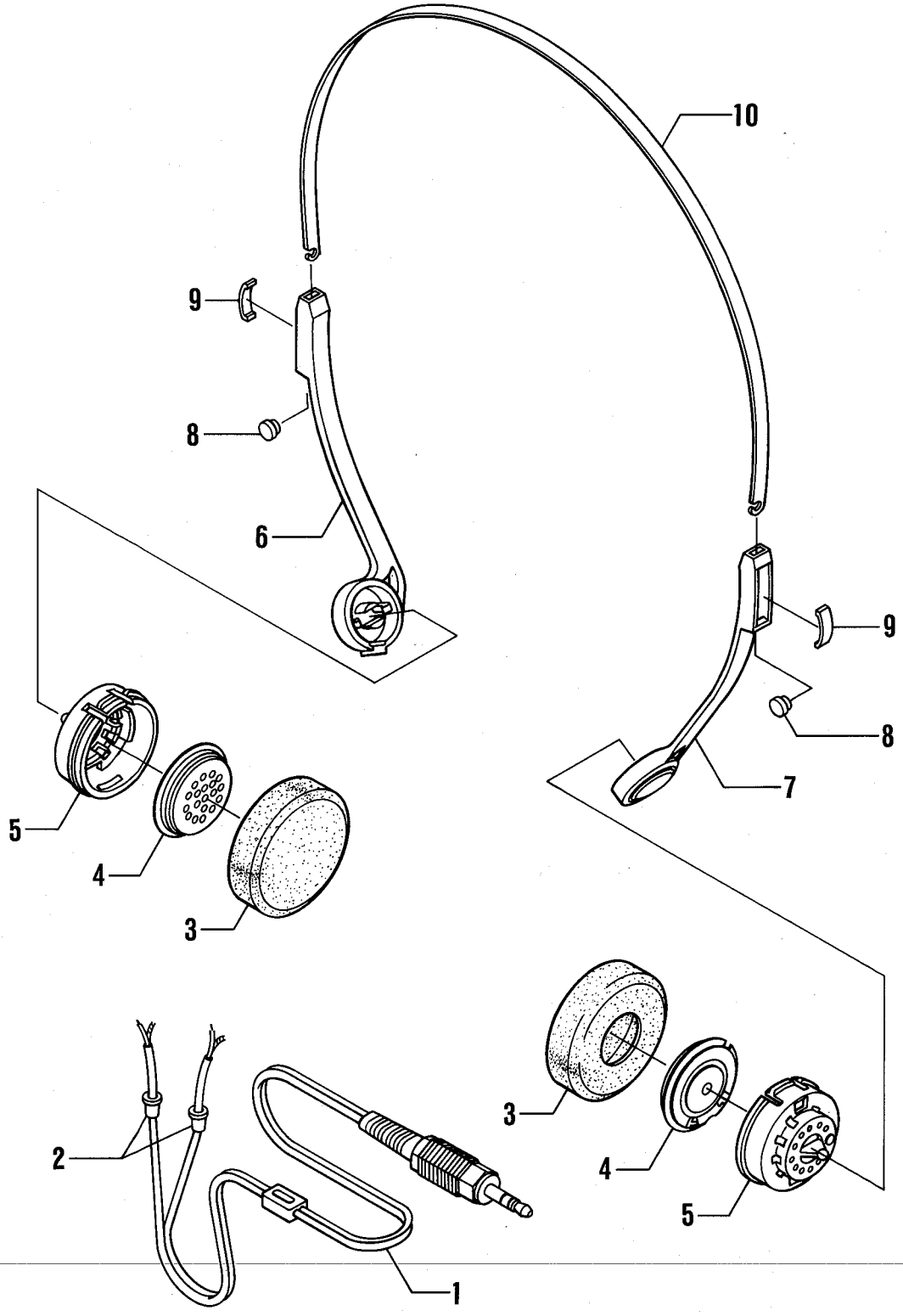
NOTES:

1. Parts order must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and resistors must be multiple of 10 pcs.

CABINET EXPLODED VIEW



HEADPHONE EXPLODED VIEW



MECHANISM PARTS LIST

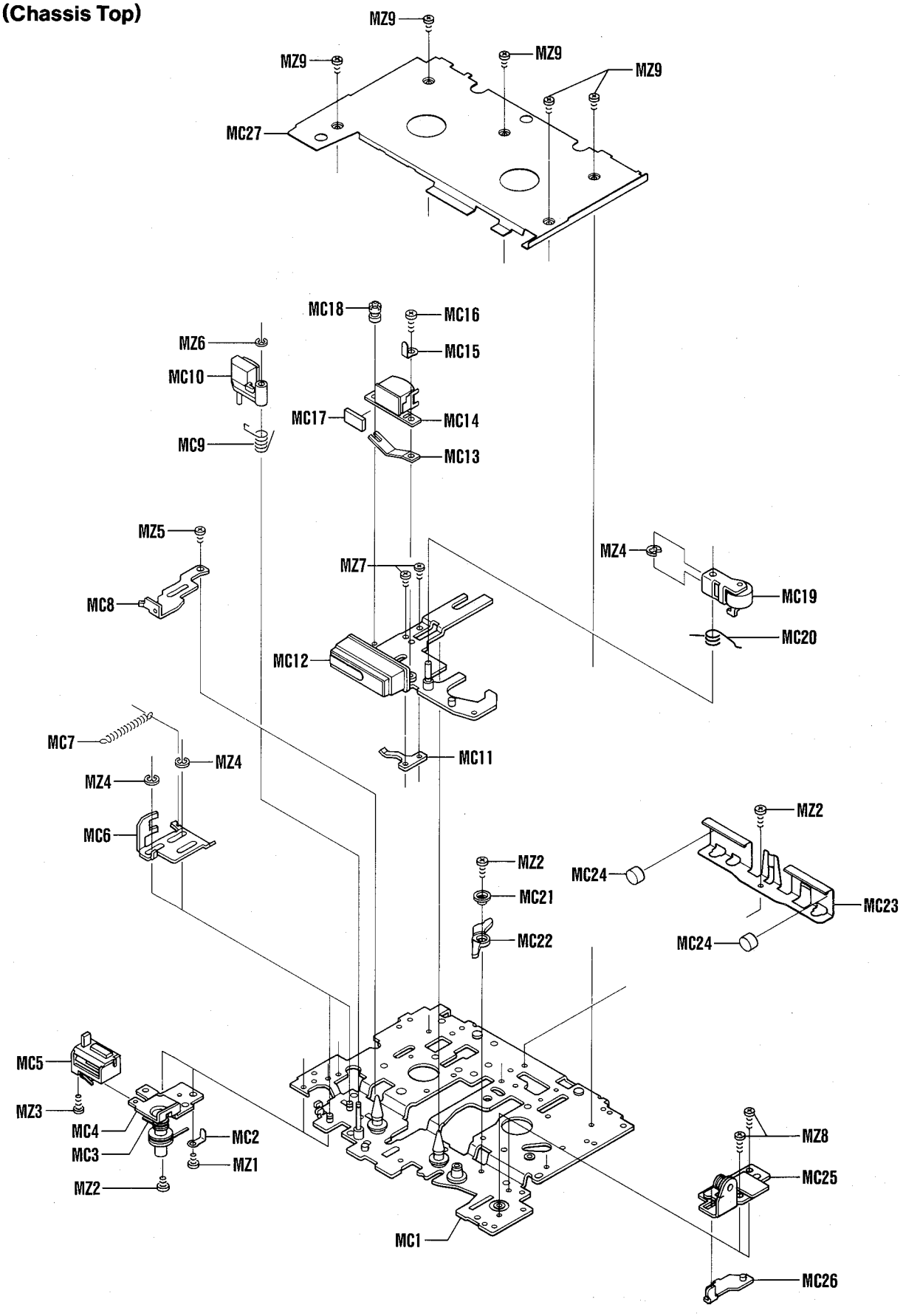
Ref. No.	Part No.	Description		Q'ty
	MECHANISM			
C403	CC1 0 2500 KE00C	Ceramic	0.001μF 50V ± 10%	1
MC1	141 0 3119 18704	Chassis Assy		1
MC2	141 2 4729 06500	Lug		1
MC3	141 2 5649 19600	Counter Belt		1
MC4	141 0 8139 01200	Counter Bracket Assy		1
MC5	141 2 8119 07202	Counter		1
MC6	141 2 7319 41400	Tape Guide		1
MC7	141 2 8549 04600	Spring, Tape Guide		1
MC8	141 2 7419 72800	Sub Record Lever		1
MC9	141 2 8519 94000	Spring, Erase Head Arm		1
MC10	141 0 7439 09000	Erase Head Arm Assy		1
MC11	141 2 7319 42400	Tape Guide Actuate		1
MC12	141 0 7419 26802	Completed Slide Base		1
MC13	141 2 8539 38500	Spring, Head		1
MC14	4 2429 72080	R/P Head [HD1]		1
MC15	141 2 4729 01900	Lug		1
MC16	141 2 4219 03000	Screw, Pan Hd.	+M2.0x3.0	1
MC17	141 2 4469 18200	Cushion		1
MC18	141 2 4179 02200	Nut, Head		1
MC19	141 0 5419 03000	Pinch Roller Assy		1
MC20	141 2 8519 93400	Spring, Pinch Roller		1
MC21	141 2 3529 26900	Spacer		1
MC22	141 2 7439 20700	Take-up Actuate		1
MC23	141 2 8539 38600	Spring, Cassette		1
MC24	141 2 4469 14404	Damper		2
MC25	141 0 3169 06600	Eject Arm Bracket Assy		1
MC26	141 0 7319 22500	Lid Lock Plate Assy		1
MC27	141 2 1219 17402	Chassis Panel		1
MC28	4 5279 71043	Motor [M1]		1
MC29	141 2 4459 27400	Cushion		2
MC30	141 2 3789 07500	Motor Bracket		1
MC31	141 2 4459 24900	Cushion, Motor		2
MC32	141 2 3529 27400	Spacer, Motor Cushion		2
MC33	141 2 4459 28700	Cushion		1
MC34	141 2 4539 30100	Washer		2
MC35	141 2 5519 36300	Drive Pulley		1
MC36	141 2 4539 17500	Washer		10
MC37	141 2 4539 29100	Washer		1
MC38	141 0 5219 07000	Flywheel Assy		1
MC39	141 2 5649 17200	Drive Belt		1
MC40	141 2 8459 03300	Flywheel Support		1
MC41	141 2 4469 28700	Flywheel Thrust		1
MC42	141 2 4469 14502	Cushion		1
MC43	141 2 8519 93600	Spring, Play Lever		1
MC44	141 0 7419 27102	Record Lever Assy		1
MC45	141 0 7419 26902	F.FWD Lever Assy		1
MC46	141 2 8519 93700	Spring, F.FWD Lever		2
MC47	141 0 7419 27002	Rewind Lever Assy		1
MC48	141 2 8519 93800	Spring, Slide Base		1
MC49	141 0 7319 21100	Base Lock Plate Assy		1
MC50	141 0 7419 26702	Completed Stop Lever		1
MC51	141 2 8519 94400	Spring, Tape Guide		1
MC52	141 2 3529 27300	Spacer, Support Plate		1
MC53	141 0 7319 21302	Support Plate Assy		1
MC54	141 2 8549 04000	Spring, Stop Lever		1
MC55	141 2 7319 41600	Eject Actuate Plate		1
MC56	141 2 4539 19200	Washer		1
MC57	141 2 8519 60600	Spring, Tension		1
MC58	141 2 8549 00300	Spring, Lock Lever		1
MC59	141 2 8519 94300	Spring, Lock Plate		2
MC60	141 2 7319 41801	Play Actuate Plate		1
MC61	141 2 4569 05700	Washer		3
MC62	141 0 7439 08602	Review Link Assy		1
MC63	141 2 7419 74800	Switch Lever		1
MC64	141 2 8519 93500	Spring, Interlock		1
MC65	141 2 7439 21300	Interlock		1
MC66	141 2 3529 29300	Spacer		1
MC67	141 0 3169 05900	Reel Plate Assy		1
MC68	141 2 4539 09401	Washer		2
MC69	141 2 4539 08000	Washer		3
MC70	141 0 5349 01401	Reel Spindle Assy		1
MC71	141 0 5349 01301	Reel Spindle Assy		1
MC72	141 2 4419 07701	Cushion		1
MC73	141 2 4539 18100	Washer		7
MC74	141 2 5519 36000	Wind Gear		1
MC75	141 0 5519 07601	Torque Limitter Assy		1
MC76	141 0 7439 08900	Idler Arm Assy		1
MC77	141 2 8519 93300	Spring, Idler Arm		1
MC78	141 2 8559 01100	Spring, Reel Brake		1
MC79	141 0 5319 05900	Completed Friction		1
MC80	141 2 4539 18200	Washer		1
MC81	141 2 5519 36100	Gear		1
MC82	141 2 7439 20800	Select Gear Arm		1
MC83	141 2 3529 27000	Spacer, Select Arm		1
MC84	141 0 7439 08800	Select Arm Assy		1
MC85	141 2 3529 26800	Spacer		2
MC86	141 0 7439 08701	Select Link Assy		1
MC87	141 2 8519 93100	Spring, Select Cam		1
MC88	141 2 5519 35900	Rewind Gear		1
MC89	141 2 5519 35800	Supply Gear		1
MC90	141 2 4539 01401	Washer		1
MC91	141 2 8559 03100	Spring, Brake		1
MC92	141 0 7419 26400	Idler Base Assy		1
MC93	141 2 4539 28400	Washer		1
MC94	141 2 5519 35601	Take-up Pulley		1
MC95	141 2 5519 35500	Take-up Idler		1
MC96	141 2 8549 13500	Spring, Idler Base		1
MC97	141 2 4539 26400	Washer		1
MC98	141 0 7319 21401	Record Plate Assy		1
MC99	141 2 8519 94500	Spring, Record Plate		1
MC100	141 2 5649 15900	Counter Belt		1
MC101	141 2 5519 35700	Counter Gear		1
MZ1	127 3 1317 02013	PI Screw-1, Pan Hd.	+M1.7x2.0	4
MZ2	127 3 1317 01613	PI Screw-1, Pan Hd.	+M1.7x1.6	5
MZ3	127 3 1314 01613	PI Screw-1, Pan Hd.	+M1.4x1.6	5
MZ4	112 3 1301 50082	E Ring	M1.5	14
MZ5	127 3 1214 01618	PI Screw-1, Flat Hd.	+M1.4x1.6	1
MZ6	112 3 1301 20082	E Ring	M1.2	2
MZ7	127 3 1214 01613	PI Screw-1, Flat Hd.	+M1.4x1.6	2
MZ8	127 3 1314 02513	PI Screw-1, Pan Hd.	+M1.4x2.5	2
MZ9	127 3 1314 01614	PI Screw-1, Pan Hd.	+M1.4x1.6	5
MZ10	127 3 1217 04013	PI Screw-1, Flat Hd.	+M1.7x4.0	2
MZ11	127 3 1317 03013	PI Screw-1, Pan Hd.	+M1.7x3.0	3
MZ12	127 3 1214 02513	PI Screw-1, Flat Hd.	+M1.4x2.5	3

NOTES:

1. Parts order must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and resistors must be multiple of 10 pcs.

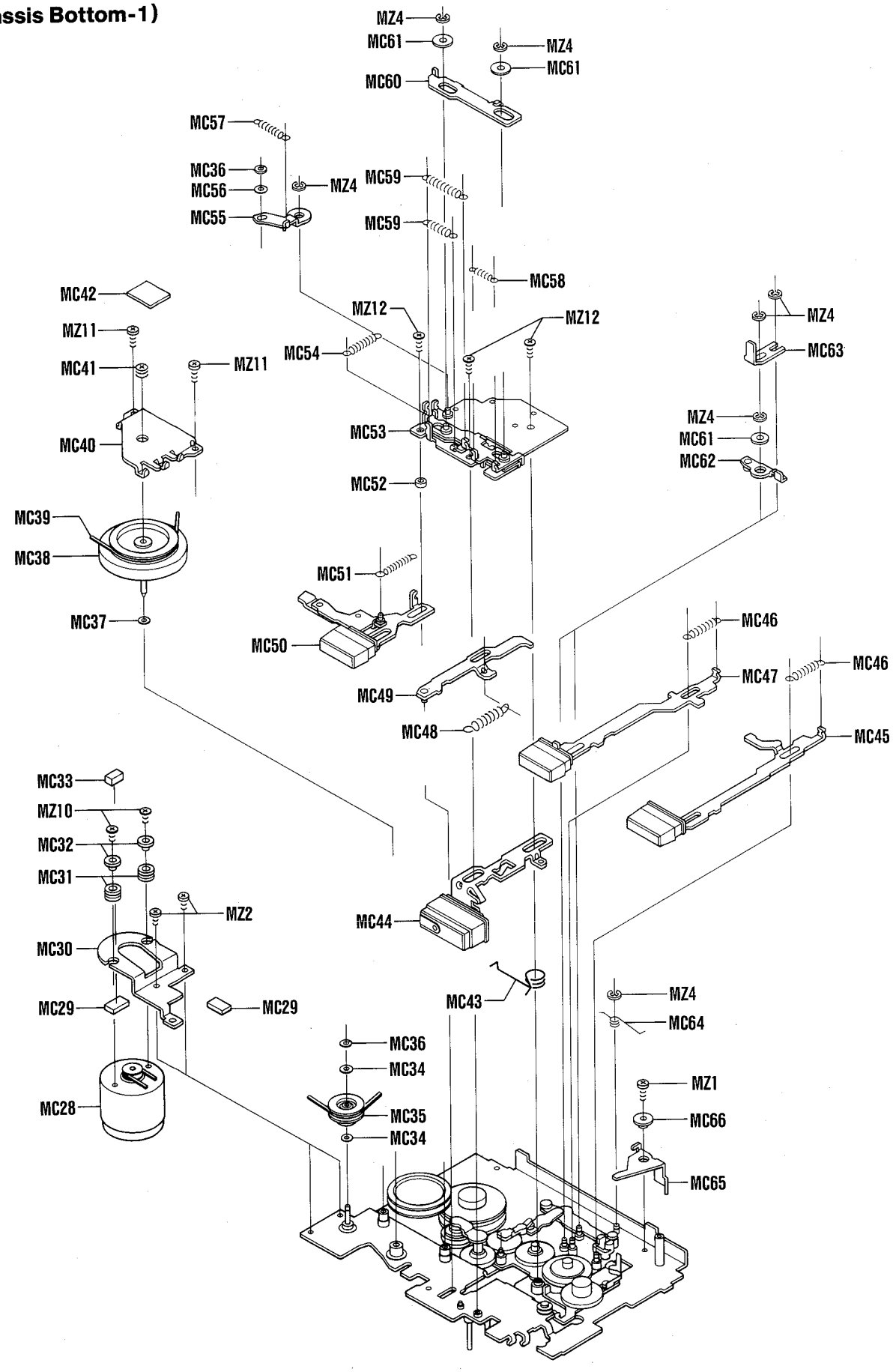
MECHANISM EXPLODED VIEW

(Chassis Top)



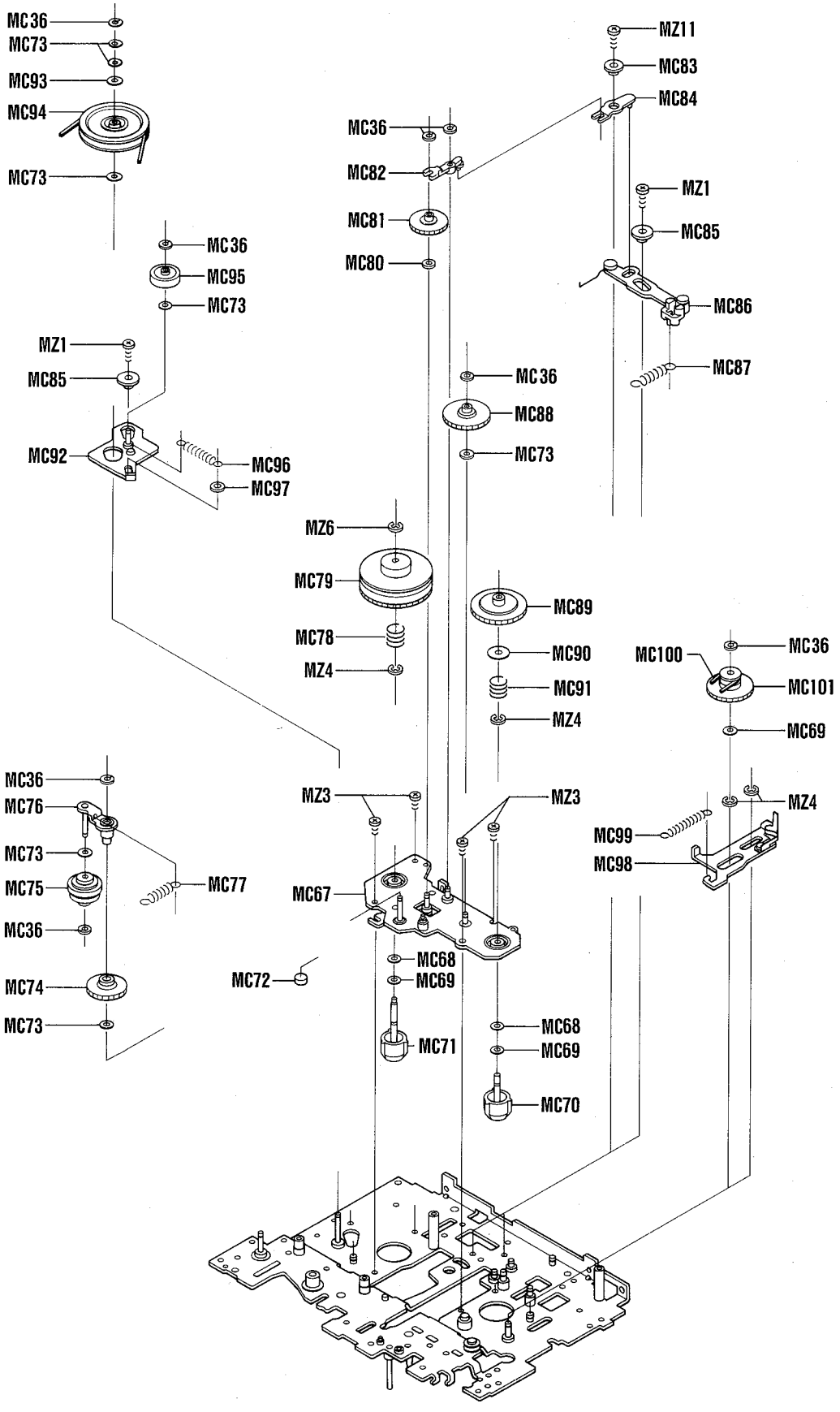
MECHANISM EXPLODED VIEW (Continued)

(Chassis Bottom-1)



MECHANISM EXPLODED VIEW (Continued)

(Chassis Bottom-2)



P.C.BOARD PARTS LIST

Ref. No.	Part No.	Description	Q'ty
	AMPLIFIER P.C.B. ASSY		
PCB1	4 1329 77620	Amplifier P.C.B. Assy	1
	4 2319 75300	Switch P.C.B. Assy (Tape Select) (Slide Switch [S4] is Included)	1
	141 2 1639 39201	Speed Control Knob	1
	141 2 1639 45900	Volume Knob, Right	1
	141 2 1639 46000	Volume Knob, Left	1
	141 2 2449 34800	Sheet	5
	141 2 2899 16800	Adhesive Sheet	3
	141 2 2899 16900	Adhesive Sheet	1
	141 2 2899 21600	Adhesive Sheet	1
	141 2 3829 30100	Spring, Terminal	3
	141 2 4219 08900	Screw	1
	141 2 4219 23700	Eyelet	3
	141 2 4219 26800	Screw	1
	141 2 4459 10000	Damper, Cassette Lid	1
	141 2 4469 17200	Cushion	1
	141 2 4729 04700	Staple, 10mm	3
	141 2 4729 05000	Staple, 5mm	3
	141 2 4729 07900	Staple, 7.5mm	1
S1	4 2319 74490	Leaf Switch (Power)	1
S2	4 2319 73621	Slide Switch (Pause)	1
S3	4 2319 74501	Slide Switch (Record/Play)	1
J1	4 2359 74320	Ext. Power Jack	1
J2	4 2359 75500	1P Jack (Headphones)	1
J3	4 2359 75141	1P Jack (Mike)	1
VR1	4 2229 73690	Control Volume (Volume/A-10kΩ)	1
VR2	4 2229 73222	Control Volume (Speed Control/8kΩ)	1
T101	4 2589 71901	OSC Trans	1
T201	4 2589 71901	OSC Trans	1
L101	4 2659 70380	Choke Coil (10μH)	1
L201	4 2659 70380	Choke Coil (10μH)	1
P301	4 2229 73340	Potentiometer (B-3kΩ)	1
D1	4 2029 71320	Diode, MA151WK	1
D2	205 5 9040 44210	Diode, DS 442	1
D51	205 5 9040 44210	Diode, DS 442	1
D52	4 2029 71360	Diode, MA151WA	1
IC101	4 2069 71091	IC, CX-807	1
IC201	4 2069 71091	IC, CX-807	1
Q1	4 2039 70721	Transistor, 2SD 601	1
Q3	4 2039 70731	Transistor, 2SB 709	1
Q4	4 2039 70721	Transistor, 2SD 601	1
Q6	4 2039 70721	Transistor, 2SD 601	1
Q51	4 2039 70731	Transistor, 2SB 709	1
Q52	4 2039 70721	Transistor, 2SD 601	1
Q53	4 2039 70721	Transistor, 2SD 601	1
Q54	4 2039 70721	Transistor, 2SD 601	1
Q55	4 2039 70800	Transistor, 2SB 738	1
Q56	4 2039 70721	Transistor, 2SD 601	1
Q57	4 2039 70844	Photo-Coupler, GP-2S02AB	1
Q101	4 2039 70721	Transistor, 2SD 601	1
Q102	4 2039 70721	Transistor, 2SD 601	1
Q201	4 2039 70721	Transistor, 2SD 601	1
Q202	4 2039 70721	Transistor, 2SD 601	1
Q301	4 2039 70721	Transistor, 2SD 601	1
Q302	4 2039 70721	Transistor, 2SD 601	1
Q303	4 2039 70731	Transistor, 2SB 709	1
Q304	4 2039 70820	Transistor, 2SD 874	1
Q305	4 2039 70721	Transistor, 2SD 601	1
TH301	204 5 9000 00650	Thermister, SDT 65	1
C1	CG1 0 2500 KH00B	Chip 0.001μF 50V ± 10%	1
C2	CG1 0 2500 KH00B	Chip 0.001μF 50V ± 10%	1
C3	CD4 7 5250 0002V	Electrolytic 4.7μF 25V	1
C4	CD2 2 663A 0002V	Electrolytic 22μF 6.3V	1
C5	CD4 7 640A 0002V	Electrolytic 47μF 4V	1
C6	CD2 2 5500 0002V	Electrolytic 2.2μF 50V	1
C7	CD2 2 663A 0002V	Electrolytic 22μF 6.3V	1
C8	CD3 3 640A 0002V	Electrolytic 33μF 4V	1
C9	CD1 0 763A 0002V	Electrolytic 100μF 6.3V	1
C10	CD1 0 5500 0002V	Electrolytic 1μF 50V	1
C11	CD1 0 6160 0002V	Electrolytic 10μF 16V	1
C51	CD1 0 5500 0002V	Electrolytic 1μF 50V	1
C52	CD4 7 663A 0002V	Electrolytic 47μF 6.3V	1
C53	CG2 2 3250 KH00B	Chip 0.022μF 25V ± 10%	1
C101	CG1 8 2500 KH00B	Chip 0.0018μF 50V ± 10%	1
C102	CT2 2 4350 K00DV	Tantalume 0.22μF 35V ± 10%	1
C103	CG1 0 4250 ZI00B	Chip 0.1μF 25V +80,-20%	1
C104	CD1 0 5500 0002V	Electrolytic 1μF 50V	1
C105	CG2 2 2500 KH00B	Chip 0.0022μF 50V ± 10%	1
C106	CD1 0 763A 0002V	Electrolytic 100μF 6.3V	1
C107	CD4 7 5250 0002V	Electrolytic 4.7μF 25V	1
C108	CG1 0 4250 ZI00B	Chip 0.1μF 25V +80,-20%	1
C109	CG8 2 2500 KH00B	Chip 0.0082μF 50V ± 10%	1
C110	CM3 3 2500 K00MV	Mylar 0.0033μF 50V ± 10%	1
C111	CD2 2 740A 0002V	Electrolytic 220μF 4V	1
C112	CD2 2 740A 0002V	Electrolytic 220μF 4V	1
C113	CD2 2 740A 0002V	Electrolytic 220μF 4V	1
C114	CG3 3 3250 MH00A	Chip 0.033μF 25V ± 20%	1
C115	CD1 0 4500 0002V	Electrolytic 0.1μF 50V	1
C116	CD1 0 5500 0002V	Electrolytic 1μF 50V	1
C117	CD2 2 740A 0002V	Electrolytic 220μF 4V	1
C118	CG2 2 2500 KH00B	Chip 0.0022μF 50V ± 10%	1
C119	CG1 5 3250 KH00B	Chip 0.015μF 25V ± 10%	1
C120	CD4 7 5250 0002V	Electrolytic 4.7μF 25V	1
C121	CG4 7 2500 KH00B	Chip 0.0047μF 50V ± 10%	1
C122	CG1 0 3500 ZI00B	Chip 0.01μF 50V +80,-20%	1
C123	CG4 7 1500 KH00B	Chip 470pF 50V ± 10%	1
C124	CC2 2 1500 KE00C	Ceramic 220pF 50V ± 10%	1
C201	CG1 8 2500 KH00B	Chip 0.0018μF 50V ± 10%	1
C202	CT2 2 4350 K00DV	Tantalume 0.22μF 35V ± 10%	1
C203	CG1 0 4250 ZI00B	Chip 0.1μF 25V +80,-20%	1
C204	CD1 0 5500 0002V	Electrolytic 1μF 50V	1
C205	CG2 2 2500 KH00B	Chip 0.0022μF 50V ± 10%	1
C206	CD1 0 763A 0002V	Electrolytic 100μF 6.3V	1
C207	CD4 7 5250 0002V	Electrolytic 4.7μF 25V	1
C208	CG1 0 4250 ZI00B	Chip 0.1μF 25V +80,-20%	1
C209	CG8 2 2500 KH00B	Chip 0.0082μF 50V ± 10%	1
C210	CM3 3 2500 K00MV	Mylar 0.0033μF 50V ± 10%	1
C211	CD2 2 740A 0002V	Electrolytic 220μF 4V	1
C212	CD2 2 740A 0002V	Electrolytic 220μF 4V	1
C213	CD2 2 740A 0002V	Electrolytic 220μF 4V	1
C214	CG3 3 3250 MH00A	Chip 0.033μF 25V ± 20%	1
C215	CD1 0 4500 0002V	Electrolytic 0.1μF 50V	1
C216	CD1 0 5500 0002V	Electrolytic 1μF 50V	1
C217	CD2 2 740A 0002V	Electrolytic 220μF 4V	1
C218	CG2 2 2500 KH00B	Chip 0.0022μF 50V ± 10%	1
C219	CG1 5 3250 KH00B	Chip 0.015μF 25V ± 10%	1
C220	CD4 7 5250 0002V	Electrolytic 4.7μF 25V	1
C221	CG4 7 2500 KH00B	Chip 0.0047μF 50V ± 10%	1
C222	CG1 0 3500 ZI00B	Chip 0.01μF 50V +80,-20%	1
C223	CG4 7 1500 KH00B	Chip 470pF 50V ± 10%	1
C224	CC2 2 1500 KE00C	Ceramic 220pF 50V ± 10%	1
C301	CG1 0 3500 ZI00B	Chip 0.01μF 50V +80,-20%	1
C302	CG1 0 3500 ZI00B	Chip 0.01μF 50V +80,-20%	1
C303	CD2 2 663A 0002V	Electrolytic 22μF 6.3V	1
C401	CG1 0 2500 KH00A	Chip 0.001μF 50V ± 10%	1
C402	CG1 0 2500 KH00A	Chip 0.001μF 50V ± 10%	1
C404	CG1 0 2500 KH00B	Chip 0.001μF 50V ± 10%	1

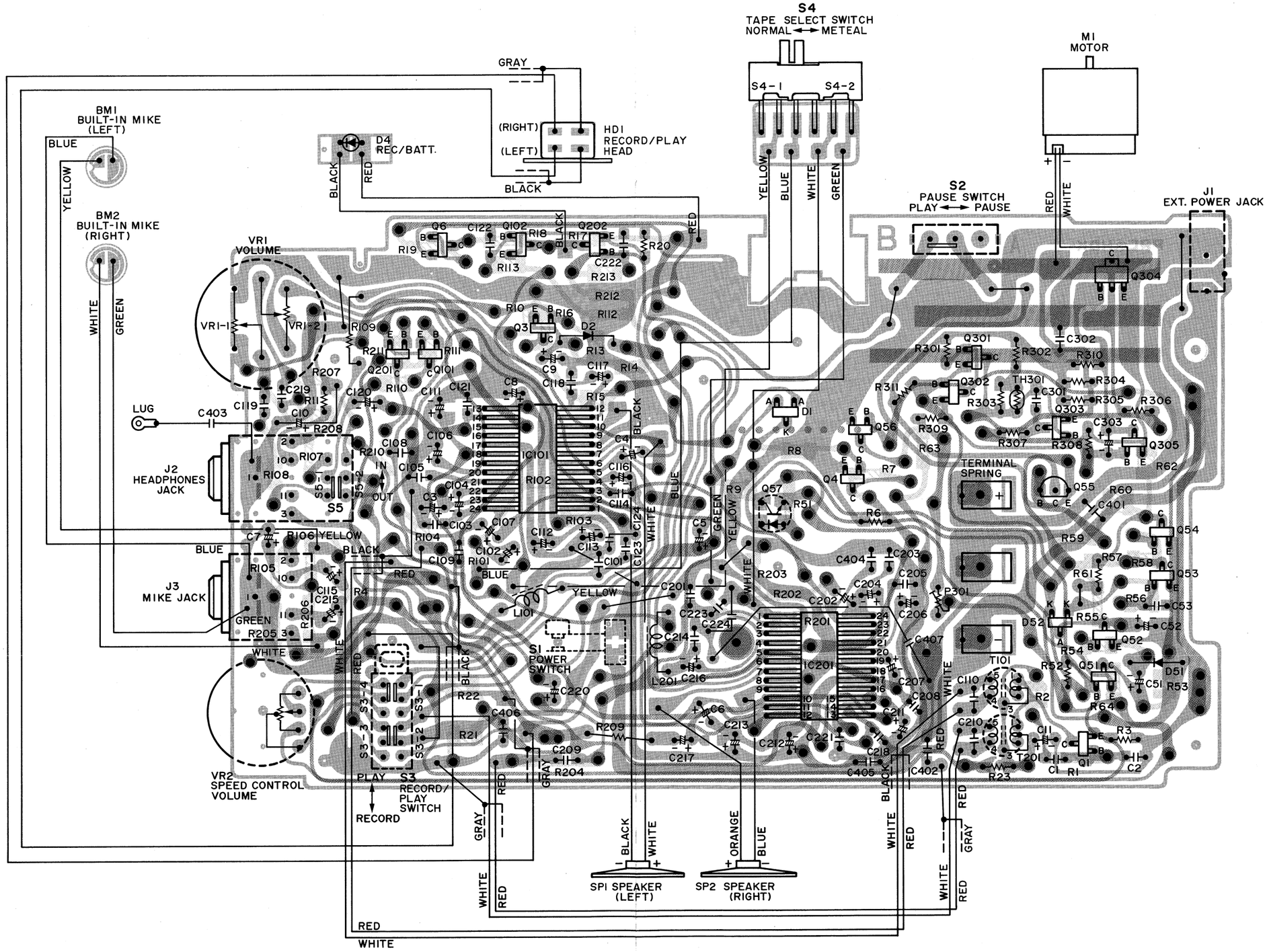
P.C.BOARD PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty
C405	CG1 0 2500 KH00A	Chip 0.001μF 50V ± 10%	1
C406	CG1 0 2500 KH00A	Chip 0.001μF 50V ± 10%	1
C407	CC1 0 2500 KE00C	Ceramic 0.001μF 50V ± 10%	1
R03	RG2 2 A121 KA000	Chip 2.2Ω 1/8W ± 10%	1
R6	RG1 5 5121 KA000	Chip 1.5MΩ 1/8W ± 10%	1
R11	RG1 0 3121 JA000	Chip 10kΩ 1/8W ± 5%	1
R20	RG1 0 1121 JA000	Chip 100Ω 1/8W ± 5%	1
R23	RG5 6 0121 JA000	Chip 56Ω 1/8W ± 5%	1
R52	RG3 3 4121 JA000	Chip 330kΩ 1/8W ± 5%	1
R61	RG8 2 4121 JA000	Chip 820kΩ 1/8W ± 5%	1
R109	RD4 7 A251 JS000	Carbon 4.7Ω 1/4W ± 5%	1
R209	RD4 7 A251 JS000	Carbon 4.7Ω 1/4W ± 5%	1
R301	RG1 2 3121 JA000	Chip 12kΩ 1/8W ± 5%	1
R302	RG1 0 2121 JA000	Chip 1kΩ 1/8W ± 5%	1
R303	RG3 9 1121 JA000	Chip 390Ω 1/8W ± 5%	1
R304	RG3 9 A121 JA000	Chip 3.9Ω 1/8W ± 5%	1
R305	RG2 2 A121 JA000	Chip 2.2Ω 1/8W ± 5%	1
R306	RG2 2 2121 JA000	Chip 2.2kΩ 1/8W ± 5%	1
R307	RG1 5 2121 JA000	Chip 1.5kΩ 1/8W ± 5%	1
R308	RG5 6 2121 JA000	Chip 5.6kΩ 1/8W ± 5%	1
R309	RG1 0 2121 JA000	Chip 1kΩ 1/8W ± 5%	1
R310	RG3 9 1121 JA000	Chip 390Ω 1/8W ± 5%	1
R311	RG4 7 4121 JA000	Chip 470kΩ 1/8W ± 5%	1
	INDICATOR P.C.B. ASSY		
	4 2029 71890	LED Indicator P.C.B. Assy	1
	4 2269 37130	PCB, LED	1
	141 2 1329 11400	Cap, LED	1
D4	4 2029 70600	LED, SLP24B (Record/Battery)	1

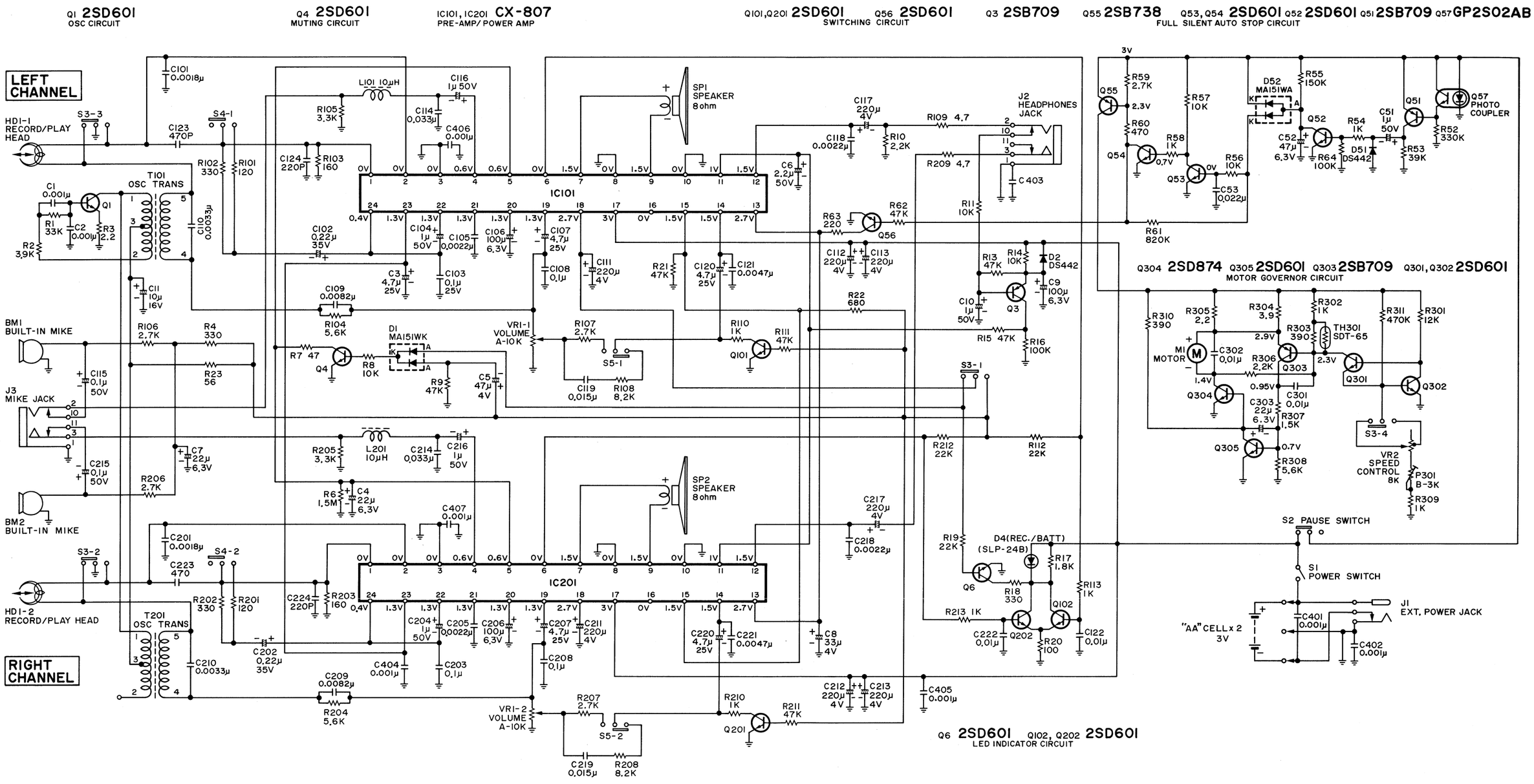
NOTES:

1. Parts order must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and resistors must be multiple of 10 pcs.

WIRING DIAGRAM



SCHEMATIC DIAGRAM



No.	Name	Position
S1	Power Switch	OFF
S2	Pause Switch	PLAY
S3	Record/Play Switch	PLAY
S4	Tape Select Switch	Normal
S5	Headphone Switch	OUT